

EXECUTIVE SUMMARY

What is BLM proposing to do in this plan?

The Bureau of Land Management (BLM) proposes to amend its 1998 Northeast National Petroleum Reserve-Alaska (NPR-A) Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) to consider making additional portions of the BLM-administered lands (public lands) in the 4.6-million-acre planning area available for oil and gas leasing. Specifically, this plan would analyze making available for leasing lands that, pursuant to the terms of the 1998 Northeast NPR-A IAP/EIS ROD, are currently unavailable. In addition, BLM proposes to develop performance-based lease stipulations and Required Operating Procedures (ROPs) in the planning area similar to those stipulations and ROPs included in the Northwest NPR-A IAP/EIS ROD of 2004. The stipulations would apply to oil and gas activities, but the ROPs would apply to both oil and gas activities and non-oil and gas activities. (For more information, see **Chapter 1**).

Why is BLM doing this plan?

The purpose and need to amend the 1998 Northeast NPR-A IAP/EIS is to address the Nation's need for production of more oil and gas through additional leasing in the northeast portion of the NPR-A. (For more information, see **Chapter 1**).

What is the North Slope Borough's role in this plan?

The North Slope Borough (NSB) is participating in the supplemental planning process as a cooperating agency in order to maximize use of available resources and special expertise and minimize duplication in those areas of overlapping responsibilities. Cooperating agency status does not indicate the NSB's implicit or explicit support for any particular alternative.

Why a "Supplemental" IAP/EIS?

The BLM is undertaking the Northeast NPR-A Supplemental Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) to supplement its Northeast NPR-A Final Amended IAP/EIS, which was issued in January 2005 and for which a Record of Decision (ROD) was issued on January 11, 2006. This Supplement is necessary because on September 25, 2006 the U.S. District Court for the District of Alaska in *National Audubon Society v. Kempthorne* (case number 1:05-cv-00008-JKS), found inadequate an important aspect of the Amended IAP/EIS's cumulative impact analysis and as a result vacated the ROD. (For more information, see **Chapter 1**).

How is this Supplement the same and how is it different from the earlier Amended IAP/EIS?

Because this document supplements the Amended IAP/EIS, much of its contents are the same or very similar to that contained in the earlier document. The issues (see **Chapter 1**) and range of alternatives for BLM's future management of the planning area (see **Chapter 2**) are essentially unchanged from those analyzed in the Northeast NPR-A Final Amended IAP/EIS issued in January 2005. Alternative A is the same as in the Amended IAP/EIS.

Except for minor edits, the addition of one ROP (ROP L-1), a 10-year deferral included in Alternative D, and changing an indefinite deferral of leasing in Teshekpuk Lake in Alternative D to no leasing in the lake, the other alternatives are also the same as in the Amended IAP/EIS. Because the planning area's physical, biological, and social features have changed little since the publication of the Amended IAP/EIS, much of the description of the affected environment (see Chapter 3) repeats information provided in the Amended IAP/EIS. And because the alternatives and knowledge about the resources and uses are so similar to that which formed the basis for analysis in the Amended IAP/EIS, the types of impacts (see **Chapter 4**) identified are very similar to those described in the Amended IAP/EIS. To assure clarity and for the convenience of the reader, however, the Supplement carries forward much of the analysis that was in the Amended IAP/EIS.

The analysis of impacts has changed, though, to address the inadequacy identified by the District Court and to reflect changed circumstances and new information since the preparation of the Amended IAP/EIS. Changes to the cumulative impact analysis to address the court's concern focus on the relationship of oil and gas leasing and development in Northeast NPR-A on the one hand and the potential development and impacts from development in the Northwest NPR-A on the other. This discussion can be found in **section 4.7.3.3**, which describes how development that may occur under the Northeast NPR-A IAP/EIS's Alternatives B, C, and D could, to differing degrees, facilitate development in Northwest NPR-A more than what may occur under Alternative A, and in the "Contribution of Supplement Alternatives to Cumulative Effects" sections of the subsections within **section 4.7.7**, which describe how impacts from development in Northwest NPR-A could differ among the alternatives considered in the Supplement for the Northeast NPR-A planning area.

Several circumstances have changed since development of the Amended IAP/EIS that have also resulted in changes in the analysis. They include:

- An increase in the price of oil—The Amended IAP/EIS's analysis posited oil prices at no more than \$30/barrel and presented development scenarios based on that price. Current prices are well above that figure, and the Department of Energy projects long-term prices of approximately \$60 to \$70 per barrel. While it is possible that actual development would not be greater than that analyzed in the Amended IAP/EIS, in order to reduce the chance that the Supplement's scenarios would understate the amount of development that might occur, BLM presents new scenarios for development in this Supplement that are based on higher anticipated prices of oil. (For a discussion of BLM's estimates of oil production and the scenarios for its production, see **section 4.2.1.2**.)
- Considering commercial gas development—The Amended IAP/EIS did not analyze direct, indirect, or cumulative impacts from commercial gas development. There is no guarantee that the current efforts at the federal and state levels to encourage commercial gas development on the North Slope will result in a pipeline to bring gas to market. Yet important decisions on the long-term future of gas development on the North Slope are being made both during preparation of this Supplement and in the months and years thereafter, and it is possible that a gas pipeline and North Slope gas development could be the result. Consequently, the Supplement analyzes the impacts of commercial gas development both within the planning area as a result of decisions in this plan and the cumulative impacts associated with gas development. (For a discussion of cumulative impact assumptions, see **sections 4.7.2 through 4.7.6**.)
- Other cumulative impact assumption changes—Since issuance of the Amended IAP/EIS, the U.S. Minerals Management Service has conducted an oil and gas lease sale in the

Chukchi Sea and the State of Alaska has suspended consideration of a road that would connect Nuiqsut and NPR-A to the existing road network. The cumulative impact analysis has been revised to reflect these changes.

- Proposed listing of the polar bear—The U.S. Fish and Wildlife Service proposed listing the polar bear as threatened on January 9, 2007. This Supplement analyzes impacts to polar bears in this context.
- Additional information—The Supplemental IAP/EIS's impact analysis has incorporated relevant new studies of the area, including some related to resources and to global climate change.

In addition, BLM, with the assistance of the North Slope Borough, has added new information regarding the state of, and the potential impacts to, public health (see **Public Health** sections of **Chapters 3 and 4**). This Supplement also presents potential new mitigation measures to address adverse impacts to air, fish, birds, and public health in addition to the protective measures incorporated in the alternatives themselves as lease stipulations and ROPs.

What are the major changes between the Draft and this Final Supplemental IAP/EIS?

The Final Supplemental IAP/EIS clarifies and expands the analysis in the Draft IAP/EIS in response to comments on the Draft and developments and new studies and information that have become available since the Draft was printed. The Final Supplemental IAP/EIS also identifies a Preferred Alternative. The Preferred Alternative is substantially the same as Alternative D in the Draft Supplemental IAP/EIS. It does, however, include language that clarifies some stipulations and ROPs. Specifically, the following stipulations or ROPs applicable to Alternative D (and in some cases to Alternatives B and/or C) have been edited to respond to comments and to clarify the intent: A-1 through A-7, B-2, C-3, D-2, E-1 through E-6, E-8, E-11, F-1, H-1, J, K-1, K-3 through K-5, K-10 and K-11. In addition, the Southern Caribou Calving Area near Teshekpuk Lake in T. 13 N., R. 6 W., U.M. was enlarged by about 7,000 acres, and instead of an indefinite deferral of oil and gas leasing in Teshekpuk Lake and its islands, the Preferred Alternative makes the lake and its islands unavailable for leasing. Finally, the Preferred Alternative would defer any oil and gas leasing in the portion of the planning area in which leasing was not allowed under the 1998 ROD. This deferral would be for ten years from the signing of the ROD for this Supplemental IAP/EIS.

What are the major issues and focus of controversy?

Although potential impacts to a wide variety of natural resources and to humans have been identified and analyzed in this planning process and are reflected in this Supplemental IAP/EIS, the focus of controversy is on the potential impacts of oil and gas development north and east of Teshekpuk Lake. The 1998 ROD did not make this area available for leasing, but the three action alternatives (Alternatives B, C, and D) offered in this Supplement would make some or all of this area available for leasing, though this availability under Alternative D would be deferred for ten years. This area is considered to have high oil and gas value, but is also of great importance for waterfowl (including during the flightless molting period), caribou (for calving and relief from insects), and subsistence (both because of dependence on potentially affected caribou and because of subsistence harvesting on these lands). (For information on these and other resources and uses of the land, see **Chapter 3**).

What alternatives are BLM considering?

The Supplemental IAP/EIS considers essentially the same alternatives as were presented in the Amended IAP/EIS. (For more information on the alternatives analyzed in this Supplement, see **Chapter 2**, especially section 2.3 and Table 2-2).

Alternative A, the no action alternative that would continue the management established in the 1998 ROD, differs from the other alternatives in two fundamental respects. First, in contrast to the other alternatives, it would not make land north and east of Teshekpuk Lake available for leasing. Approximately 430,000 acres north and east of Teshekpuk Lake as well as about 160,000 acres in the lake would remain unavailable for leasing. Second, Alternative A would retain prescriptive stipulations, rather than adopt performance-based stipulations. While performance-based stipulations indicate what objectives shall be achieved, Alternative A's prescriptive stipulations would continue to prescribe what lessees and other users can and cannot do on public lands within the planning area.

Alternatives B, C, and D would make portions or all of the lands north and east of Teshekpuk Lakes available for oil and gas leasing. They also adopt performance-based stipulations and ROPs. These alternatives retain a setback around Fish Creek and retain or, in some cases, expand setbacks adjacent to other streams and lakes provided in the 1998 IAP/EIS. Alternative B would withhold from leasing about 213,000 acres northeast of Teshekpuk Lake. Alternative C would make all of the planning area available for leasing. Alternative D would make all lands available for leasing, except those in Teshekpuk Lake and except that lands that were not made available under Alternative A would be deferred for ten years. It also would impose a number of strict limits on surface activities around the lake. These limits include forbidding permanent oil and gas facilities, with the exception of pipelines, on approximately 240,000 acres associated with goose molting lakes to the north and east of Teshekpuk Lake, on additional lands east and northwest of the lake in important caribou movement areas, and on caribou calving areas south and southeast of the lake. Alternative D would also limit new permanent surface disturbance on seven approximately 50,000-acre lease tracts north and east of the lake (all within the 10-year deferral area) to no more than 300 acres per tract.

It should be noted that BLM could choose to undertake a phased leasing approach. That is, it need not offer all lands that it decides should be classified as available for leasing in the first or any subsequent lease sale. This, along with the 10-year deferral for lands north and east of Teshekpuk Lake, could result in enhanced protection of surface resources by giving BLM the opportunity to learn from exploratory drilling and development activities resulting from early lease sales, to modify the standards and requirements of the stipulations and ROPs, and to adopt additional permit requirements.

The BLM also considered a number of alternatives in addition to the four described above. However, the agency eliminated them from detailed analysis because they were outside the scope of the plan, failed to meet the purpose and need of the IAP/EIS, did not add substantively to impact analysis, and/or were contrary to a legislatively-supported Secretarial decision. (For more information on alternatives considered but eliminated from detail analysis, see **section 2.5**).

How much oil production has been estimated and what impacts have been identified for each of the alternatives?

The BLM used the best available information to project oil resources, but until much more exploratory drilling occurs in the planning area, there will continue to be great uncertainty regarding how much oil is located in the area and where it is located. (For more information on oil projections, see **section 4.2.1.2**). The table below summarizes the oil resource projections for each alternative analyzed in this Supplement.

Oil Resource Estimates for Each Alternative

Alternative	A	B	C	D
Oil (MMbbl)	2,900	3,350	4,050	3,700

Impact analysis is also complex. Given that BLM does not know precisely where oil will be found, what types of exploration and development will occur in any particular area, or precisely what types and intensity of non-oil and gas activities will occur and where, the agency has had to project impacts that may occur to any resource or use of the land in any part of the planning area. It has done so using the best available information, incorporating data and analysis gathered or published since publication of the Amended IAP/EIS. (For a description of the assumptions on activities that may occur under each alternative, see **section 4.2**. For a description of the impacts that may occur under each alternative, see **sections 4.3 through 4.6** and a summary of those impacts in **Table 2-3** in Chapter 2).

Impacts would be of several general types. Except for overland moves, non-oil and gas activities would generally occur during the summer, and be of short duration (e.g., aircraft flight or landing) and localized (e.g., a research or recreational camp). These activities would be unlikely to have more than short-term and localized impacts. Seismic activities, overland moves, and exploratory drilling would all occur during the winter when the ground is frozen and snow-covered and many species have migrated out of the area. These activities could briefly impact the species that remain through the winter. Their effects could linger into the following summer or longer, in the form of varied impacts to vegetation and soils, and range from the compression of standing dead vegetation to crushed tussocks and dead or broken shrubs. In addition, should these activities coincide in time and place with subsistence activities, they could negatively impact that use and have ramifications for sociocultural systems and public health.

The greatest impacts would be associated with oil and gas development. Placement of gravel drilling pads, roads, airstrips, and staging areas, and the activities that take place on them, as well as construction of oil and gas pipelines, could permanently disturb or destroy soil and vegetation; impound and disturb water; risk disturbing, displacing, or killing fish and wildlife; risk disturbing or destroying paleontological and cultural resources; and potentially affect subsistence (by affecting species or impeding user access), sociocultural systems, public health, and recreation. The impacts from developing and using these facilities would vary by resource and use. Because the land likely to be disturbed is a very small percentage of the 4.6 million surface acres the BLM manages in the planning area, impacts to soil, vegetation, water, and paleontological and cultural resources would be minor. Impacts to fish, wildlife, subsistence, sociocultural systems, public health, and recreation would extend beyond the immediate vicinity of the disturbed ground and, depending on location and protective measures used, could be out of proportion with a development's footprint as a percentage of the planning area. A crude oil or

refined fuel spill that extended beyond a drilling pad, would increase impacts to a wide variety of resources and uses.

Alternative C, which makes the entire planning area available for leasing, would have the greatest impact, primarily because it would likely lead to the most exploratory drilling and development of oil. Alternative A, because it makes the smallest area available to leasing, would have the least impacts. Alternatives B and D, which make more lands available than would be available under Alternative A, but not as much land as in Alternative C, would have impact levels between those of Alternatives A and C.

Several potential occurrences could increase the level of impact to some resources under Alternative C, and to a lesser degree under Alternatives B and D, as compared to Alternative A. One is oil field development in the caribou insect-relief areas and core calving grounds to the south, east, and north of Teshekpuk Lake, which are used by the Teshekpuk Lake Herd caribou and would retain no-lease or no-surface-activity protections under Alternative A. Development in these areas could interfere with caribou movements and have some reproductive consequences, which could in turn impact subsistence hunters and those dependent on subsistence foods with potential sociocultural and public health ramifications. Secondly, development in the goose molting habitat north and east of Teshekpuk Lake could interfere with waterfowl breeding, brood-rearing, and molting activities. An oil spill in this area that reached lakes or other waterbodies used by waterfowl could magnify these impacts.

Cumulative impacts are those that could occur both as a result of the action taken stemming from decisions made in this IAP/EIS process and from other past, present, or reasonably foreseeable future activities. (For a description of the cumulative impacts, see **section 4.7**). Non-oil and gas activities, such as commercial and subsistence hunting, development within Native villages, and industrial activity in Europe and Asia have impacted resources on the North Slope in the past, and will continue to do so in the future. Air pollutants associated with industrial activities in Europe and Asia are believed primarily responsible for causing Arctic haze on the North Slope. Development of military facilities and villages has disturbed several thousand acres of soil, water, vegetation resources, and fish and wildlife habitat, and these effects will persist indefinitely. Much of this development has occurred along the coastline, an area that provides important habitat for caribou seeking insect-relief, and for nesting and molting waterfowl. As a result of commercial whaling impacting bowhead whale and other whale stocks a century ago, limits are placed on the number of whales that can be harvested today by Native peoples of the North Slope. Subsistence harvests cause the loss of small numbers of waterfowl, caribou, and whales, but populations of most subsistence species remain healthy and their harvest is an important contribution to the health and culture of the residents of the North Slope.

Oil and gas activities have had substantial impacts on natural resources and their users on the North Slope. Many of the impacts of past activities are likely to persist, and additional oil and gas activities both onshore and offshore will continue to impact resources and the people of the North Slope. In addressing the inadequacy in the Amended IAP/EIS cited by the district court, this Supplement specifically points to the potential, under certain circumstances, for development in the northeastern part of Northwest NPR-A to be greater or occur sooner under Alternatives B, C, and D than under Alternative A, with potential associated additional impacts. Oil and gas facilities emit air pollutants. Over 17,000 acres of surface disturbance has affected soil, paleontological, cultural, water, vegetation, and fish and wildlife habitat resources on the North Slope and thousands of more acres are likely to be directly impacted by gravel mining or placement on the tundra. Much of the past disturbance occurred before the 1970s,

and some has repaired itself through natural processes or through reclamation, but most effects of disturbance will persist for many decades. Some disturbed areas, such as gravel mine pits, now provide important overwintering habitat for fish. Oil and gas facilities have not only displaced caribou and other wildlife, but subsistence hunters also tend to avoid hunting near these facilities. For example, Nuiqsut subsistence hunters no longer hunt in traditional areas where oil-field infrastructure now exists, even though subsistence resources continue to be available. In avoiding infrastructure, subsistence users must travel further in search of fish and game than in the past. As oil and gas infrastructure expands on the North Slope, especially any expansion in high-use subsistence areas near villages, these negative impacts on subsistence, and their related effects on sociocultural systems and public health may be exacerbated. Greater oil and gas development, whether in the planning area or elsewhere on the North Slope, however, would also offer new employment opportunities and new sources of revenue for federal, state, and local governments, which could be used to improve services.

What is next?

The BLM will make no decision until at least 30 days have elapsed after issuance of this Final Supplemental IAP/EIS. The agency would then issue a Record of Decision stating its decision. Based upon that decision, BLM may conduct one or more lease sales in the planning area, with the first most likely occurring in the last quarter of 2008.

